

Illustration of Differences between pending SimonsVoss US patent application 10/726,260 („Meyerle“) and existing US patent 5,447,047 („Lin“)

Enclosed images are taken from the „Condensed Catalog“ of Yale Commercial Locks and Hardware of Yale Inc, an Assa Abloy group company (see www.yalelocks.com or www.aanai.com). The Yale catalog is taken as an example to illustrate the fundamental different approach between SimonsVoss US patent application 10/726,260 („Meyerle“) and existing US patent 5,447,047 („Lin“), almost identical products can be found from other leading manufacturers, like Corbin-Russwin, Schlage or Sargent.

The goal of the invention by Meyerle is to replace a standard mortise cylinder in a standard mortise lock. Such mechanical cylinder look alike (see figure 1)

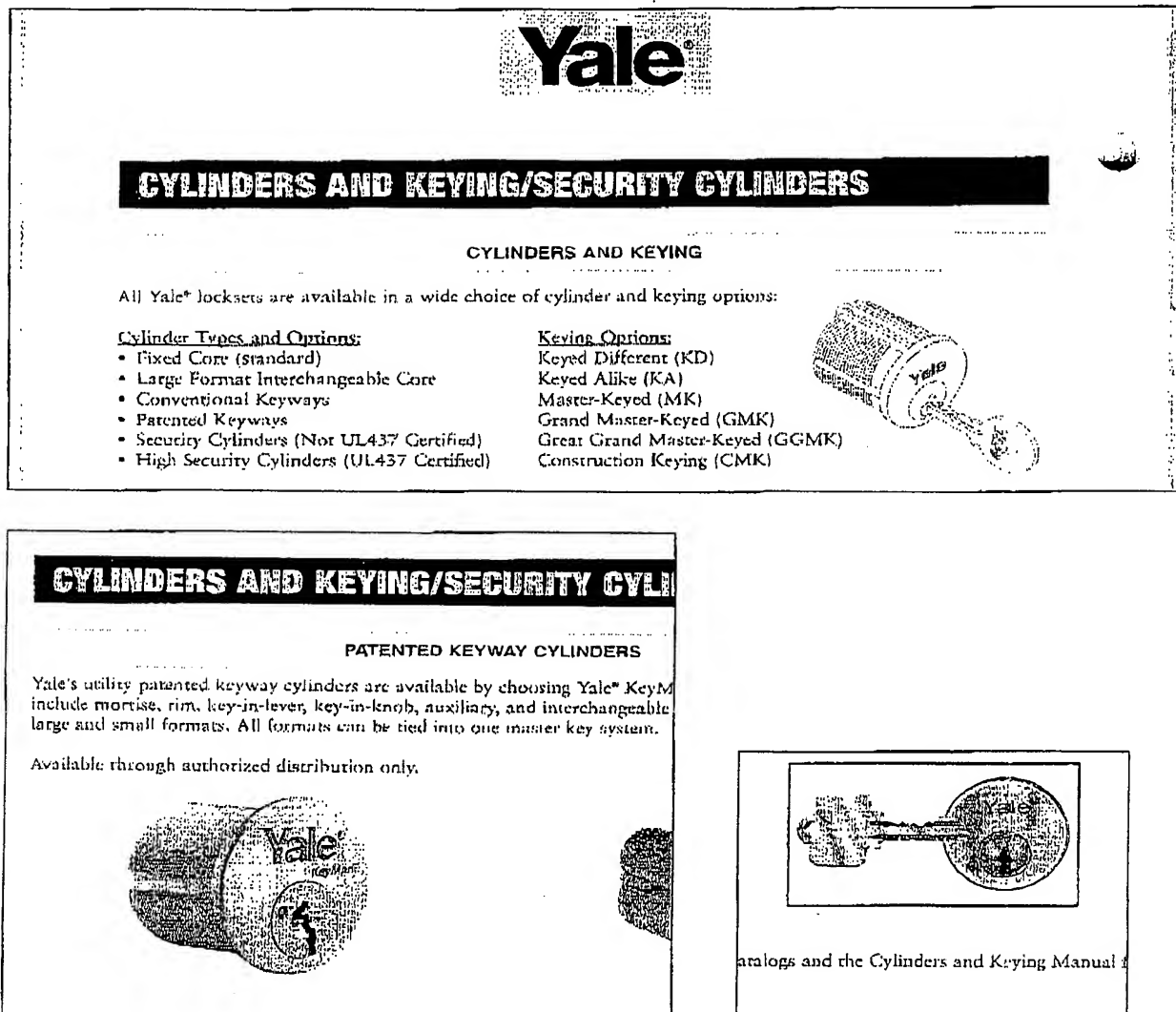


Figure 1: Typical mechanical mortise cylinder, as used in many US doors. The mortise cylinder has a standardized diameter. Typically it has to be replaced when a key is lost. Replacing the mechanical cylinder by another mechanical cylinder does not require any changes in the hardware.

MORTISE LOCKSETS

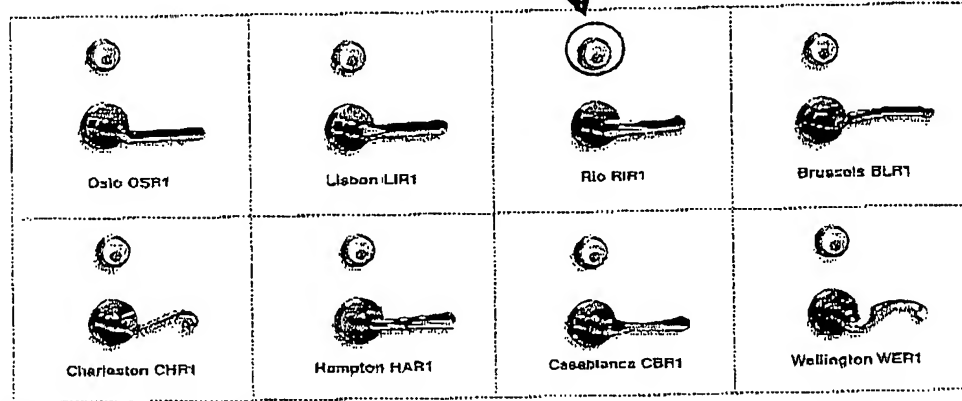
8700 SERIES MORTISE LOCKSETS

ANSI/BHMA Series 1000, operational and security Grade 1. Provides steadfast dependability and is the choice of architects and owners that require superior performance in even the toughest commercial applications. As a longtime industry standard of quality, the Yale® steel case mortise lock continues to provide the highest level of mechanical key-operated security.



Invention by Meyerle intends to replace only the cylinder, while leaving all other door hardware unchanged, especially the lock, the lever and roses. Thus, the very idea is to make replacement by an electronic cylinder as easy as replacement by a mechanical cylinder.

DESIGNER TRIM ROSES



In contrast, the solution suggested by Lin requires that the complete cylindrical lever lockset must be replaced, incl. lock, lever and roses (see figure 2.)

BORED LOCKSETS

5400LN SERIES CYLINDRICAL LEVER LOCKSETS

ANSI/BHMA Series 4000, Grade 1. Designed for industrial, commercial and institutional use, Yale's 5400LN offers no compromise when it comes to reliability and performance. With construction features such as our patented (Patent No. 4920773) Free Wheeling lever mechanism, wear-resistant chassis plates and heavy-duty return springs, it's easy to see why it's a favorite among those who demand the highest standard of product quality.



All 5400LN functions feature the patented Free Wheeling lever mechanism. When the outside lever is locked, it will rotate freely up and down while remaining securely locked.



Figure 2: Typical mechanical mortise cylinders (US standard). The solution by Lin require to replace the complete cylindrical lever locksets and additional drillings in the door for the battery pack.

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The big advantage of the solution by Meyerle is that the replacement of a mechanical cylinder through an electrical cylinder takes only a few minutes (i.e. the same time, than it would require to exchange a mechanical cylinder by another mechanical cylinder). This reduces not only installation costs, but also hardware cost, since the lock mechanism and the lever leave completely unchanged.

This offers huge advantages as compared to the solution suggested by Lin, because Lin addresses the problem of the cylindrical lock. Not only are cylindrical locks used in different doors than mortise locks, but the solution of Lin requires the the complete lever, cylinder and interactin with the lock must be replaced. In additin, it requires a large battery pack to be installed on the door, which may not be desired from a designer's point of view.

This radical different approach is not covered by the patent of Lin, which can be easily seen from the figures delivered by Lin himself.

The novelty and the inventive step comes from the fact, that everything - including access control electronics and battery - is included inthe cylinder itsself.

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